What is claimed is:

1. A portable maritime scoring and simulation system, comprising:

at least three buoys placed in a body of water;

a global positioning satellite (GPS) receiver attached to each buoy to provide a GPS location of the buoys;

an radio frequency (RF) radio system attached to each buoy;

an acoustic analysis system attached to each buoy to capture an acoustic signature of ordnance impacting the water

a microprocessor attached to each buoy wherein the microprocessor monitors and controls the GPS receiver, the RF radio system, and the acoustic analysis system;

a system controller to control and monitor the microprocessor; and,

an RF radio repeater system linking the RF radio system with the system controller wherein when an acoustic signature is captured by the acoustic analysis system, the RF radio system transmits a time of capture and the GPS location of the buoy to the system controller through the RF radio repeater system, wherein when three or more buoys transmit the captured acoustic signature, the system controller computes the location of impact using a location process.

2. The system of claim 1, comprising five buoys.

3. The system of claim 2, wherein the five buoys comprise locations in a substantially pentagonal shape.

4. The system of claim 3, wherein the location process comprises deriving an equation with a vertical position within a two dimensional plane, a horizontal position within the two dimensional plane, and time unknowns for each buoy acoustic signature capture and solving the equations for the unknowns.

5. The system of claim 4, wherein the process employs a least squares method.

6. The system of claim 1, further comprising an automated means to determine the location of the buoys with respect to a ship for buoy recovery wherein the RF repeater system marks the position of the ship for range and bearing calculations to the buoys.

7. The system of claim 4, wherein the location process further comprises a calculation of accumulated error in determining the location of an ordnance impact location in relation to each buoy acoustic signature capture.

8. The system of claim 1, wherein the RF radio repeater system comprises a digital signal processor, an RF radio, a GPS receiver, and a microphone.

9. A method of controlling the portable maritime scoring and simulation system of claim 1, comprising the steps of:

commanding the buoys to report acoustic signature captures

selecting a fire mission type;

entering fire mission data;

waiting for messages from the buoys regarding acoustic signature captures;

calculating the impact location from the acoustic signature captures;

updating the fire mission data with the impact location;

determining if the fire mission type requires further impacts, if further impacts are required, the system returns to a ready state, if further impacts are not required, the fire mission is ended; and,

recovering the buoys when system use is completed.

10. The method of claim 10, further comprising the step of selecting live or simulation communication with the buoys before arming the buoys.

11. The method of claim 11, further comprising the steps of:

loading and displaying a combat chart on a system controller display; and,

entering buoy identification numbers for each buoy to facilitate radio communication between the buoys and the system controller.

12. The method of claim 12, further comprising the step of displaying the buoy positions on the combat chart to graphically depict buoy locations.

13. The method of claim 10, wherein the step of calculating the impact location includes the steps of:

receiving messages from three or more buoys indicating an impact;

deriving linear approximation equations for two-dimensional location and time variables for each buoy sending a message; and,

solving the equations.

14. The method of claim 14, wherein messages are received from more than three buoys.

15. The method of claim 15, wherein the equations are solved by a least squares method.

16. The method of claim 15, further comprising the step of calculating an accumulated error for each of the linear approximation equations.

17. The method of claim 10, wherein the recovering the buoys step includes the system controller calculating the distance and position of each buoy from a ship.